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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/127,316	07/31/1998	TA YEN CHING		9973

7590

05/22/2002

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EXAMINER

NOLAN, SANDRA M

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 05/22/2002

21

Please find below and/or attached an Office communication concerning this application or proceeding.

7-2-21

**Office Action Summary**

Application No.

09/127,316

Applicant(s)

CHING ET AL.

Examiner

Sandra M. Nolan

Art Unit

1772

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 99-194 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 99-194 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claims*

1. Claims 99-194 are pending.

### *Rejection Maintained*

2. The 35 USC 103 rejection of claims 99-194 as unpatentable over Ching (US 5,859,145) in view of Nordstrom (US 3,536,687), as set out in section 5 of the Feb 28, 2002 Office Action (Paper No. 20), is maintained for reasons of record.

### *Response to Arguments*

3. Applicant's arguments filed in the response dated February 28, 2002 (Paper No. 20) have been fully considered but they are not persuasive. They will be responded to in the order in which they were presented.

On page 2, applicants argue that Nordstrom does not teach terpolymers of cycloalkenyl moieties or polymers comprising ethylenic groups.

However, Nordstrom teaches copolymers containing cyclohexenyl moieties, including terpolymers (see col. 4, lines 56+ and col. 5, lines 20+ where copolymers containing 3 monomers were prepared).

Furthermore, both the cyclohexenyl reactants and the acrylic monomers of Nordstrom have ethylenic groups. Ethylenic, or C=C, groups are present in the cyclic ring at col. 2, line 45 and in the unsaturated esters described at col. 3, lines 6+.

At page 2, applicants also argue that Ching does not point one to terpolymers containing Nordstrom's structure II.

However, Nordstrom does contain such terpolymers (see the discussion above) and teaches that they are crosslinkable at ambient temperatures (col. 1, lines 49-52).

At page 3, applicants present arguments against crosslinking the polymer compositions suggested by the combination of Ching and Nordstrom.

However, these arguments are highly speculative and not supported by objective evidence in the instant case. There is no evidence in this case to demonstrate that the crosslinking of oxygen scavenging moieties would either (1) reduce their ability to scavenge oxygen or (2) lead to changes in the physical properties of the resultant containers that would interfere with their use as containers. In the absence of convincing objective evidence to the contrary, the use of crosslinked polymer would be deemed an obvious way to cure the compositions so that the container retain their shape and physical properties.

On page 3, applicants argue that Nordstrom's polymers tend to crosslink in the presence of air and that this tendency leads one away from developing oxygen-scavenging systems based on the Ching polymers.

However, the tendency of Nordstrom's polymers to crosslink in air ~~is~~ actually suggests that they would make good oxygen scavengers. Since air is 80% oxygen, it is reasonable to infer that it is the oxygen in air that cause<sup>s</sup> the Nordstrom copolymers to crosslink, so that they would necessarily scavenge oxygen as they crosslink.

#### ***Final Rejection***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Conclusion***

Any inquiry concerning this communication should be directed to Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.



S. M. Nolan  
Patent Examiner  
Technology Center 1700

SMN/smn  
09127316(21)  
May 21, 2002